

WHAT IS CLAIMED IS:

1. A distributed computing system for storage and high-speed retrieval of a plurality of database tables, the system comprising:

    a first logical processor having an associated first storage area and configured to store a first portion of a first database table and a first portion of a second database table;

    a second logical processor having an associated second storage area and configured to store a second portion of said first database table and a second portion of said second database table; and

    a primary controller coupled to said first logical processor and said second logical processor and configured to

        receive a database query command,

        determine a join table definition in response to said database query command, said join table definition comprising a subset of said first database table to include in executing said database query command, and

        transmit said join table definition to said first logical processor and said second logical processor.

2. The system of Claim 1, wherein said first logical processor is further configured to generate a first join table from said first portion of said first database table in accordance with said join table definition, and said second logical processor is further configured to generate a second join table from said second portion of said first database table in accordance with said join table definition.

3. The system of Claim 2, wherein said first logical processor is further configured to execute said database query command by comparing said first portion of said second database table with said first join table to generate a first intermediate results file, and said second logical processor is further configured to execute said database query command by comparing said second portion of said second database table with said second join table to generate a second intermediate results file.

4. The system of Claim 3, wherein said first logical processor is further configured to compare said first portion of said second database table with said second join

table to generate said first intermediate results file, and said second logical processor is further configured to compare said second portion of said second database table with said first join table to generate said second intermediate results file.

5. The system of Claim 4, wherein said primary controller is further configured to generate a final results file from said first intermediate results file and said second intermediate results file.

6. The system of Claim 5, wherein said primary controller is further configured to perform a post processing operation on said final results file.

7. The system of Claim 1, wherein said first portion of said first database table and said second portion of said first database table are substantially equal portions, and said first portion of said second database table and said second portion of said second database table are substantially equal portions.

8. The system of Claim 1, wherein said first storage area and said second storage area are volatile memory areas.

9. The system of Claim 8, wherein said volatile memory areas comprise random access memory.

10. The system of Claim 1, further comprising a third logical processor having an associated third storage area and configured to store a third portion of a first database table and a third portion of a second database table.

11. A distributed computing system for storage and high-speed retrieval of a plurality of database tables, the system comprising:

a first logical processor having an associated first storage area and configured to store a first portion of a first database table and a first portion of a second database table;

a second logical processor having an associated second storage area and configured to store a second portion of said first database table and a second portion of said second database table; and

a primary controller coupled to said first logical processor and said second logical processor and configured to

receive a primary query command,

transmit a secondary query command corresponding to said primary query command to said first logical processor,

receive a first intermediate results file from said first logical processor and a second intermediate results file from said second logical processor, and

generate a final results file from said first intermediate results file and said second intermediate results file.

12. The system of Claim 11, wherein said primary controller is further configured to determine a join table definition in response to said primary query command, said join table definition comprising a subset of said first database table to include in executing said primary query command.

13. The system of Claim 12, wherein said first logical processor is further configured to generate a first join table from said first portion of said first database table in accordance with said join table definition, and said second logical processor is further configured to generate a second join table from said second portion of said first database table in accordance with said join table definition.

14. The system of Claim 13, wherein said first logical processor is further configured to execute said secondary query command by comparing said first portion of said second database table with said first join table to generate a first intermediate results file, and said second logical processor is further configured to execute said secondary query command by comparing said second portion of said second database table with said second join table to generate a second intermediate results file.

15. The system of Claim 14, wherein said first logical processor is further configured to compare said first portion of said second database table with said second join table to generate said first intermediate results file, and said second logical processor is further configured to compare said second portion of said second database table with said first join table to generate said second intermediate results file.

16. The system of Claim 11, wherein said secondary query command is a standard query language (SQL) database query command.

17. The system of Claim 11, wherein said primary controller is further configured to perform a post processing operation on said final results file.

18. The system of Claim 11, wherein said first portion of said first database table and said second portion of said first database table are substantially equal portions, and said first portion of said second database table and said second portion of said second database table are substantially equal portions.

19. The system of Claim 11, wherein said first storage area and said second storage area are volatile memory areas.

20. The system of Claim 19, wherein said volatile memory areas comprise random access memory.

21. The system of Claim 11, further comprising a third logical processor having an associated third storage area and configured to store a third portion of said first database table and a third portion of said second database table.

22. The system of Claim 11, wherein said primary query command is a standard query language (SQL) database query command

23. The system of Claim 22, wherein said secondary query command is a standard query language (SQL) database query command.

24. The system of Claim 11, wherein said secondary query command is a standard query language (SQL) database query command.

25. A distributed computing system for storage and high-speed retrieval of a plurality of database tables, the system comprising:

a first node having a first processor and a first volatile main memory and configured to store a first portion of a first database table and a first portion of a second database table; and

a second node having a second processor and a second volatile main memory and configured to store a second portion of said first database table and a second portion of said second database table, said second node coupled to said first node, and a primary controller on said second node configured to

receive a database query command,

determine a join table definition in response to said database query command, said join table definition comprising a subset of said first database table to include in executing said database query command, and

transmit said join table definition to said first processor and said second processor.

26. The system of Claim 25, wherein said first node is further configured to generate a first join table from said first portion of said first database table in accordance with said join table definition, and said second node is further configured to generate a second join table from said second portion of said first database table in accordance with said join table definition.

27. The system of Claim 26, wherein said first node is further configured to execute said database query command by comparing said first portion of said second database table with said first join table to generate a first intermediate results file, and said second node is further configured to execute said database query command by comparing said second portion of said second database table with said second join table to generate a second intermediate results file.

28. The system of Claim 27, wherein said first node is further configured to compare said first portion of said second database table with said second join table to generate said first intermediate results file, and said second node is further configured to compare said second portion of said second database table with said first join table to generate said second intermediate results file.

29. The system of Claim 28, wherein said primary controller is further configured to generate a final results file from said first intermediate results file and said second intermediate results file.

30. The system of Claim 29, wherein said primary controller is further configured to perform a post processing operation on said final results file.

31. The system of Claim 25, wherein said first portion of said first database table and said second portion of said first database table are substantially equal portions, and said first portion of said second database table and said second portion of said second database table are substantially equal portions.

32. The system of Claim 25, wherein said first storage area and said second storage area are volatile memory areas.

33. The system of Claim 32, wherein said volatile memory areas comprise random access memory.

34. The system of Claim 25, wherein said database query command is a standard query language (SQL) database query command.

35. A distributed computing system for storage and high-speed retrieval of a plurality of database tables, the system comprising:

a first node having a first processor and a first storage area and configured to store a first portion of a first database table and a first portion of a second database table; and

a second node having a second processor and a second storage area and configured to store a second portion of said first database table and a second portion of said second database table, said second node coupled to said first node, and a primary controller on said second node and configured to

receive a primary query command,

transmit a secondary query command corresponding to said primary query command to said first processor,

receive a first intermediate results file from said first node and a second intermediate results file from said second processor, and

generate a final results file from said first intermediate results file and said second intermediate results file.

36. The system of Claim 35, wherein said first node is further configured to generate a first join table from said first portion of said first database table in accordance with said join table definition, and said second node is further configured to generate a second join table from said second portion of said first database table in accordance with said join table definition.

37. The system of Claim 36, wherein said first node is further configured to compare said first portion of said second database table with said first join table to generate a first intermediate results file, and said second node is further configured to compare said second portion of said second database table with said second join table to generate a second intermediate results file.

38. The system of Claim 37, wherein said first node is further configured to compare said first portion of said second database table with said second join table to generate said first intermediate results file, and said second node is further configured to compare said second portion of said second database table with said first join table to generate said second intermediate results file.

39. The system of Claim 38, wherein said secondary query command is a standard query language (SQL) database query command.

40. The system of Claim 35, wherein said primary controller is further configured to perform a post processing operation on said final results file.

41. The system of Claim 35, wherein said first portion of said first database table and said second portion of said first database table are substantially equal portions, and said first portion of said second database table and said second portion of said second database table are substantially equal portions.

42. The system of Claim 35, wherein said first storage area and said second storage area are volatile memory areas.

43. The system of Claim 42, wherein said volatile memory areas comprise random access memory.

44. The system of Claim 35, wherein said primary query command is a standard query language (SQL) database query command.

45. The system of Claim 44, wherein said secondary query command is a standard query language (SQL) database query command.

46. The system of Claim 35, wherein said secondary query command is a standard query language (SQL) database query command.

47. A distributed computing system for storage and high-speed retrieval of a plurality of database tables and for executing a database query command, the system comprising:

a first logical processor for comparing in response to a database query command said first portion of said first database table with said first portion of said second database table, and for comparing said first portion of said first database table

with said second portion of said second database table to generate a first portion of a results file;

a second logical processor for comparing in response to said database query command said second portion of said first database table with said first portion of said second database table, and for comparing said second portion of said first database table with said second portion of said second database table to generate a second portion of said results file; and

a front end processor for receiving a database query command and for executing post-processing operations on said results file to remove duplicate matching records.

48. The system of Claim 47, wherein said database query command is a standard query language (SQL) database query command.

49. A distributed computing system for storage and high-speed retrieval of a plurality of database tables, the system comprising:

a first logical processor having an associated first storage area and configured to store a first database table;

a second logical processor having an associated second storage area and configured to store a second database table; and

a primary controller coupled to said first logical processor and said second logical processor and configured to

receive a primary query command,

transmit a secondary query command corresponding to said primary query command to said first logical processor and said second logical processor,

receive a first intermediate results file from said first logical processor and a second intermediate results file from said second logical processor, and

generate a final results file from said first intermediate results file and said second intermediate results file.

50. The system of Claim 49, wherein said primary controller is further configured to generate a final results file from said first intermediate results file and said second intermediate results file.

51. The system of Claim 49, wherein said secondary query command is a standard query language (SQL) database query command.

52. The system of Claim 49, wherein said primary controller is further configured to perform a post processing operation on said final results file.

53. The system of Claim 49, wherein said first storage area and said second storage area are volatile memory areas.

54. The system of Claim 53, wherein said volatile memory areas comprise random access memory.

55. The system of Claim 49, further comprising a third logical processor having an associated third storage area and configured to store a third database table.

56. The system of Claim 49, wherein said primary query command is a standard query language (SQL) database query command.

57. The system of Claim 49, wherein said secondary query command is a standard query language (SQL) database query command.